Flight
Advanced Strike
TACF-07
T45C
Mission

ADVANCED TACTICAL FORMATION FLYING

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ORM

- **Operational Requirements / Limitations**
  - Crew Rest / Crew Day / Work Week
  - R&I
  - IP Currency (SOP)
  - Warm Up Eligibility
  - Previous Flight Incomplete? Determine Graded Items.
- **Human Factors**
  - Life Stressors / External Factors / Personal Problems
  - Medical Status (Rest / Nourishment / Hydration)
- **Hazards and Controls**
  - Routine
  - Weather
    - Current Observations and Forecasts
    - Crosswinds
    - Fuel Considerations
  - Mission Specific

ADMIN

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- **QOD**
  - NATOPS
  - EP
  - SOP

Flight Brief

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- **Brief**
  - a. QOD (NATOPS / EP / SOP)
  - b. Wingman deconfliction responsibilities
  - c. Pattern stall/recovery

- **Practice**
  - a. Combat checks
  - b. Voice communications
  - c. Formation
  - d. Defensive Combat spread
  - e. Check turns
  - f. Shackle turns
  - g. Tactical turns
  - h. In-place turns
  - i. Random tactical formation maneuvering
  - j. Comm-out tactical formation flying
  - k. Gunsight tracking exercise
  - l. Offensive Combat Spread
  - m. Unknown airspeed rendezvous
  - n. Combat spread responsibilities
  - o. Situational awareness
  - p. Lead (if flown)
  - q. Touch and Go Landings (not graded)

Combat Spread

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– **What is it?**

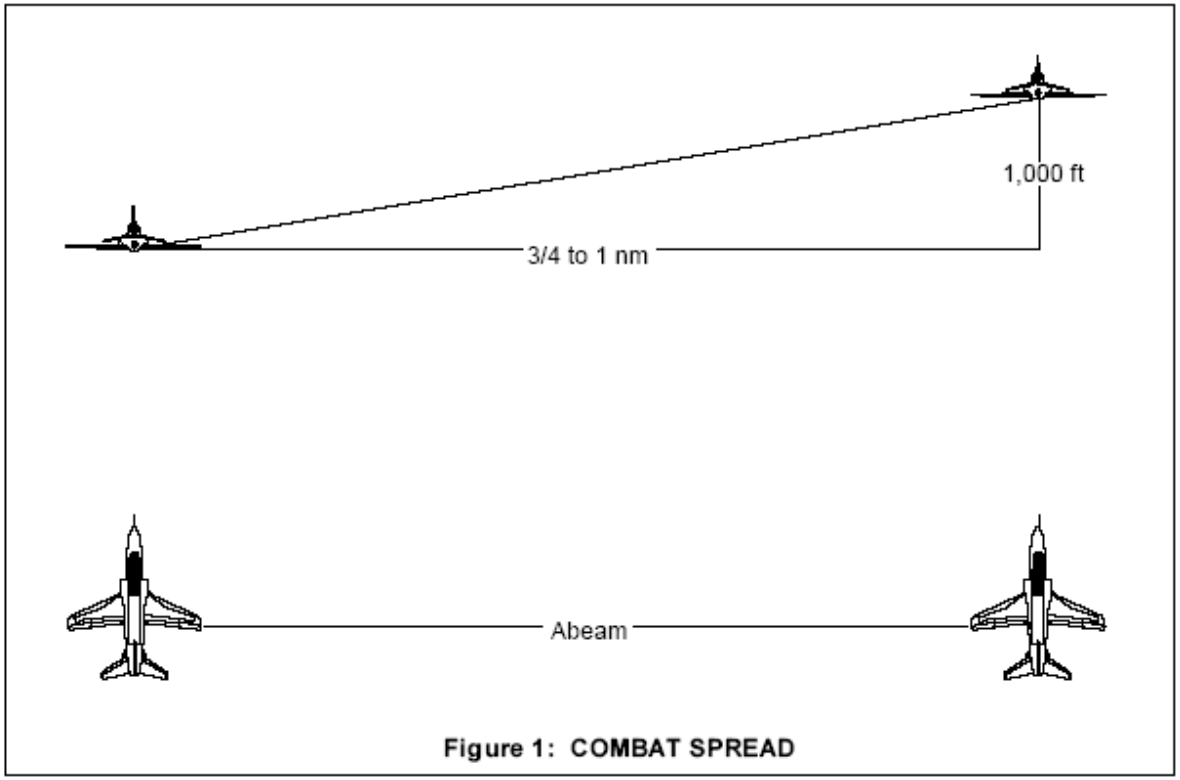

Figure 1: COMBAT SPREAD

– **How to get there**

- **Check your heading, generate an airspeed advantage, and take a 10-15° cut away from the lead.**

Maintaining Combat Spread

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- **Priorities**
  - **1. Bearing Line**
    - **Airspeed dependent (may need to account for a 5 kt TAS difference with 1000’ of altitude difference)**
  - **2. Abeam distance**
  - **3. Altitude**

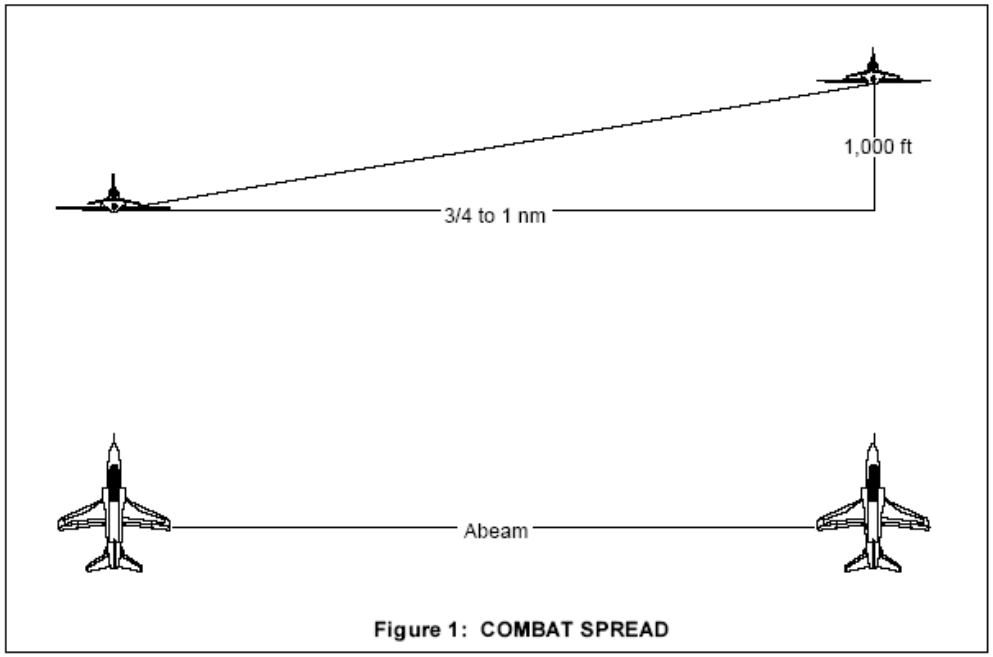

Figure 1: COMBAT SPREAD

Combat Spread Corrections

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- **If Sucked**
  - **Wingman needs to accelerate via unload and power addition to reach bearing line.**
- **If Acute**
  - **Wingman needs to decelerate. Different techniques available: 1) Climb to decelerate or 2)maintain altitude, take a cut away and then back into lead to slow downrange travel.**
- **If wide or acute,**
  - **Wingman needs to fly toward or away as appropriate. Care should be given to add enough airspeed and not to turn too much, as doing so will trade the wingman's wide or tight for a sucked position.**

Check Turns

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- **Into**
  - **Turn will make you acute.**
  - **Multiple techniques to fix position.**
  - **Big Picture: Slow your down range travel compared to lead, then fix your altitude and abeam distance.**
- **Away**
  - **Turn will make you sucked.**
  - **Big Picture: Increase your down range travel compared to the lead (ie. lower your nose and increase your airspeed), then fix your altitude and abeam distance.**

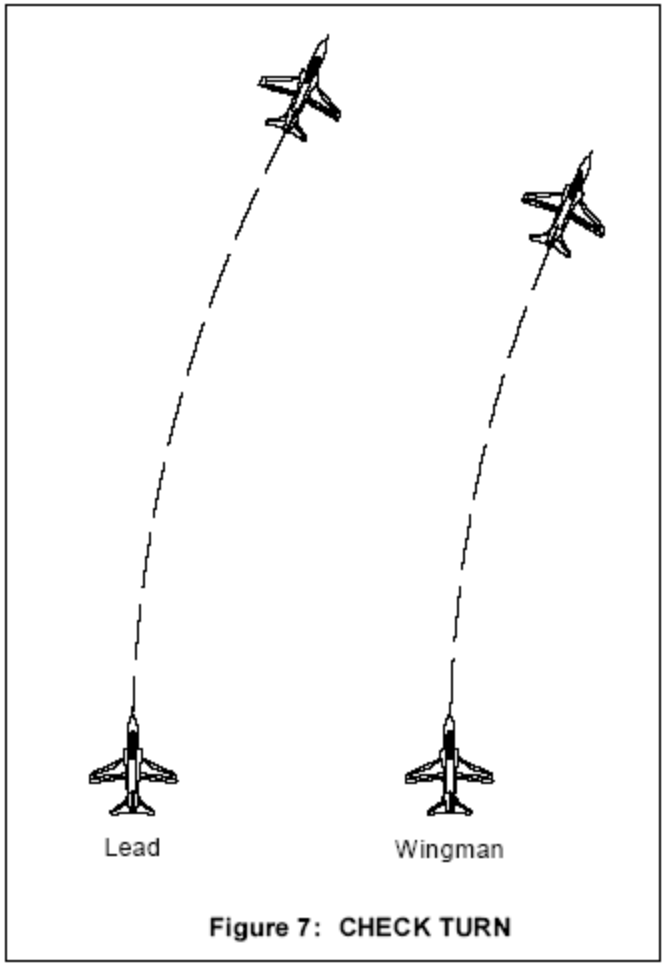

Figure 7: CHECK TURN

Tactical Turns

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- **Into**
  - **Wait until looking down lead's intakes.**
  - **Start a level 14 unit pull to the new heading while maintaining 300 kts.**
  - **Adjust timing of turn, amount of pull, and airspeed as necessary to come out of turn in position.**
- **Away**
  - **Start a level 14 unit pull to the new heading while maintaining 300 kts.**
  - **Make adjustments to fix positioning.**

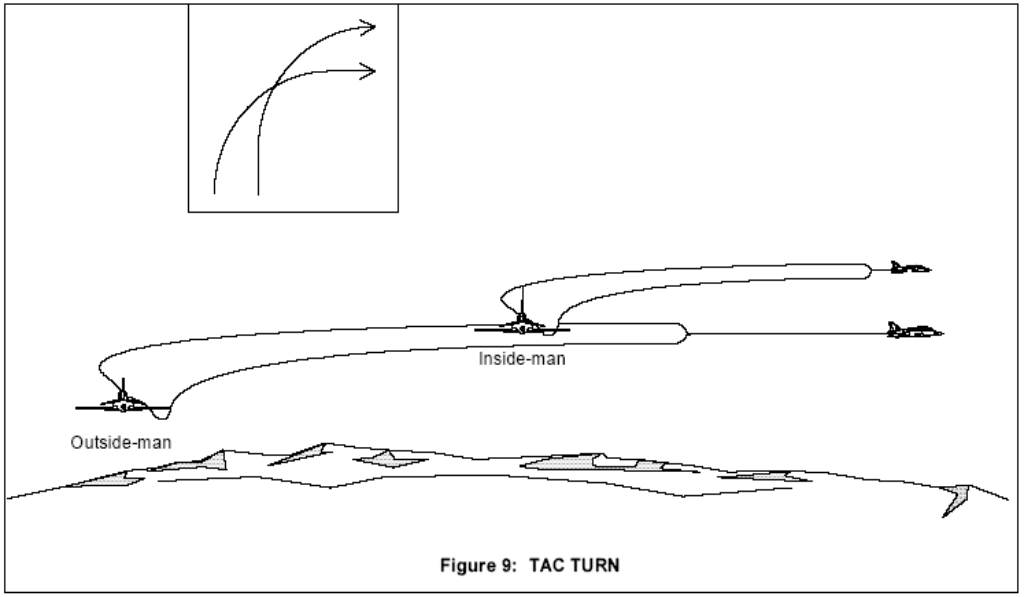

Figure 9: TAC TURN

Off Heading Tac Turns

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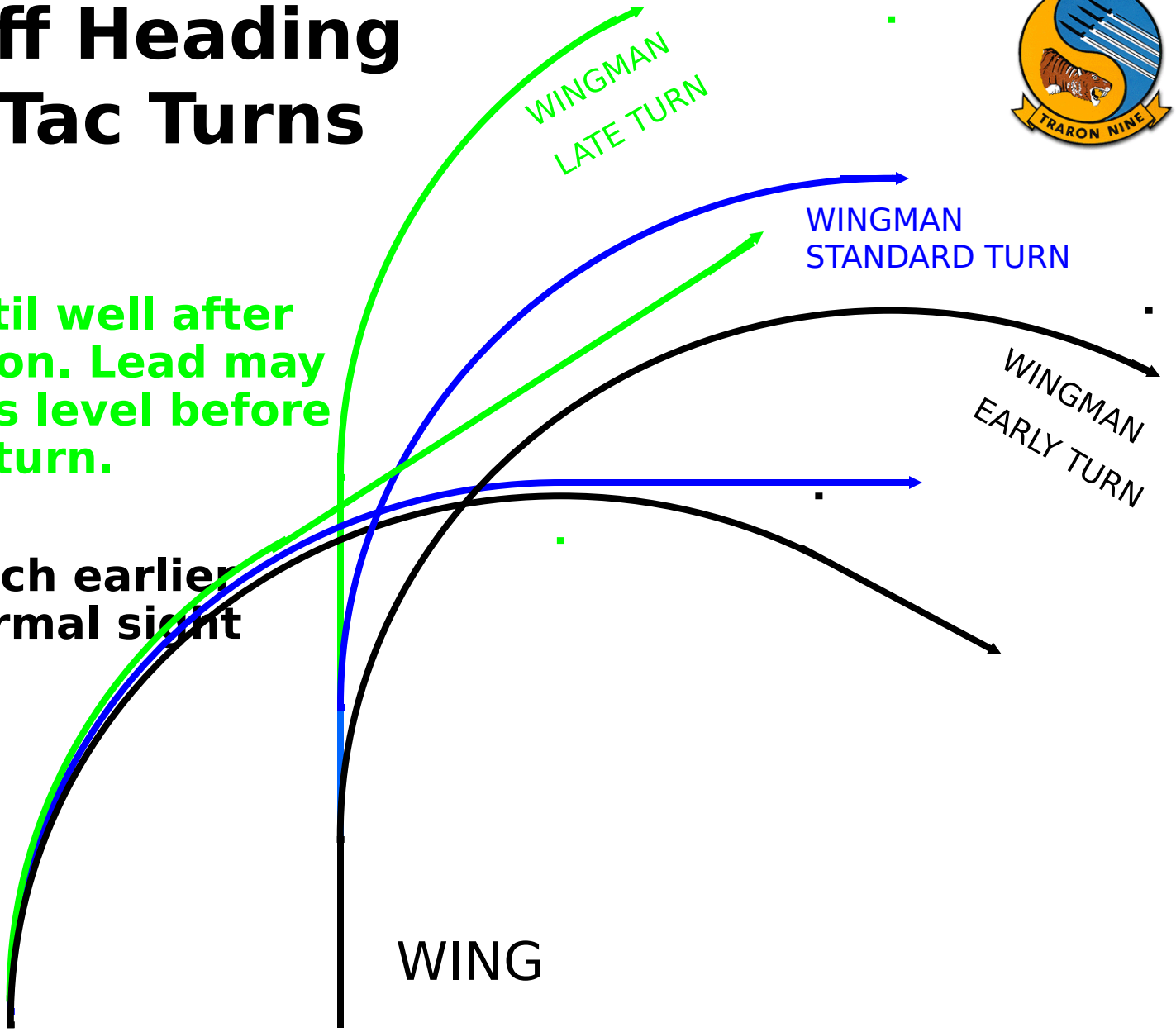
- **60° Turns**
  - **Wait until well after intakes on. Lead may be wings level before time to turn.**
- **120° Turns**
  - **Turn much earlier than normal sight picture**



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In-Place Turns

- **Into**
  - **Make a level 14 unit turn for 180°, maintain 300 kts.**
  - **Corrections for sucked / acute start.**

- **Away**
  - **Make a level 14 unit turn for 180°, maintain 300 kts.**
  - **Corrections for sucked / acute start.**
  - **Do NOT float the turn when belly up to lead!**

Off Heading In Place Turns

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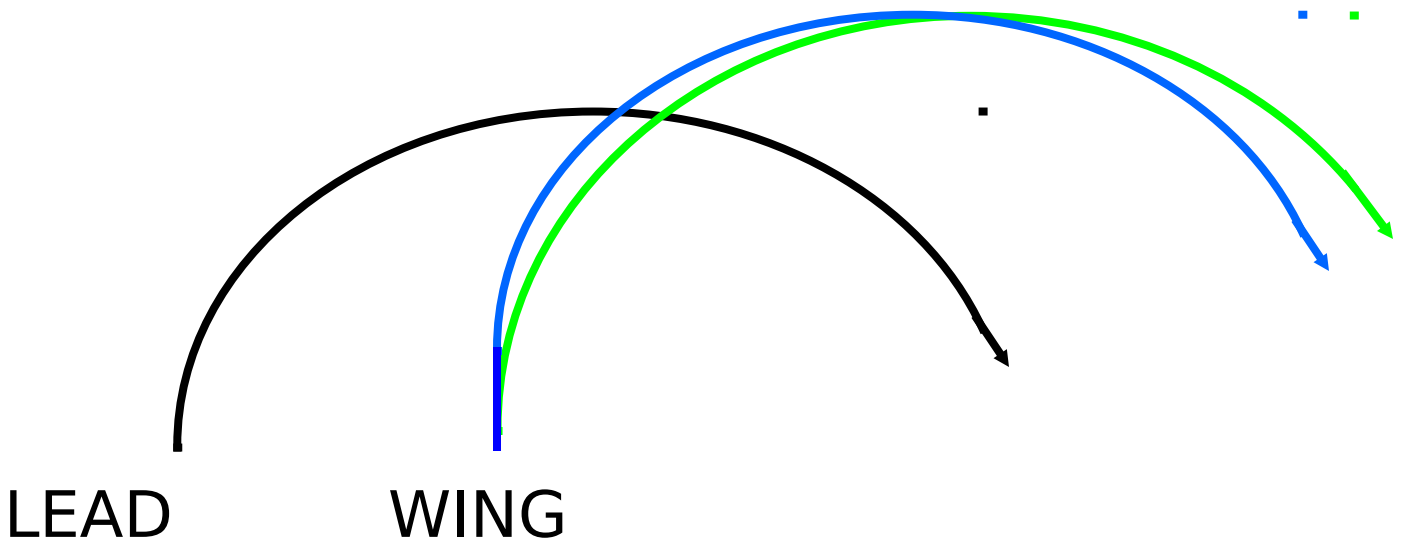
–150° Turn Into-

- **Different techniques available.**
  - **Pull less than 14 units(13-13.5)**
  - **Or Delay pull, then 14 units**



150° Turn Away

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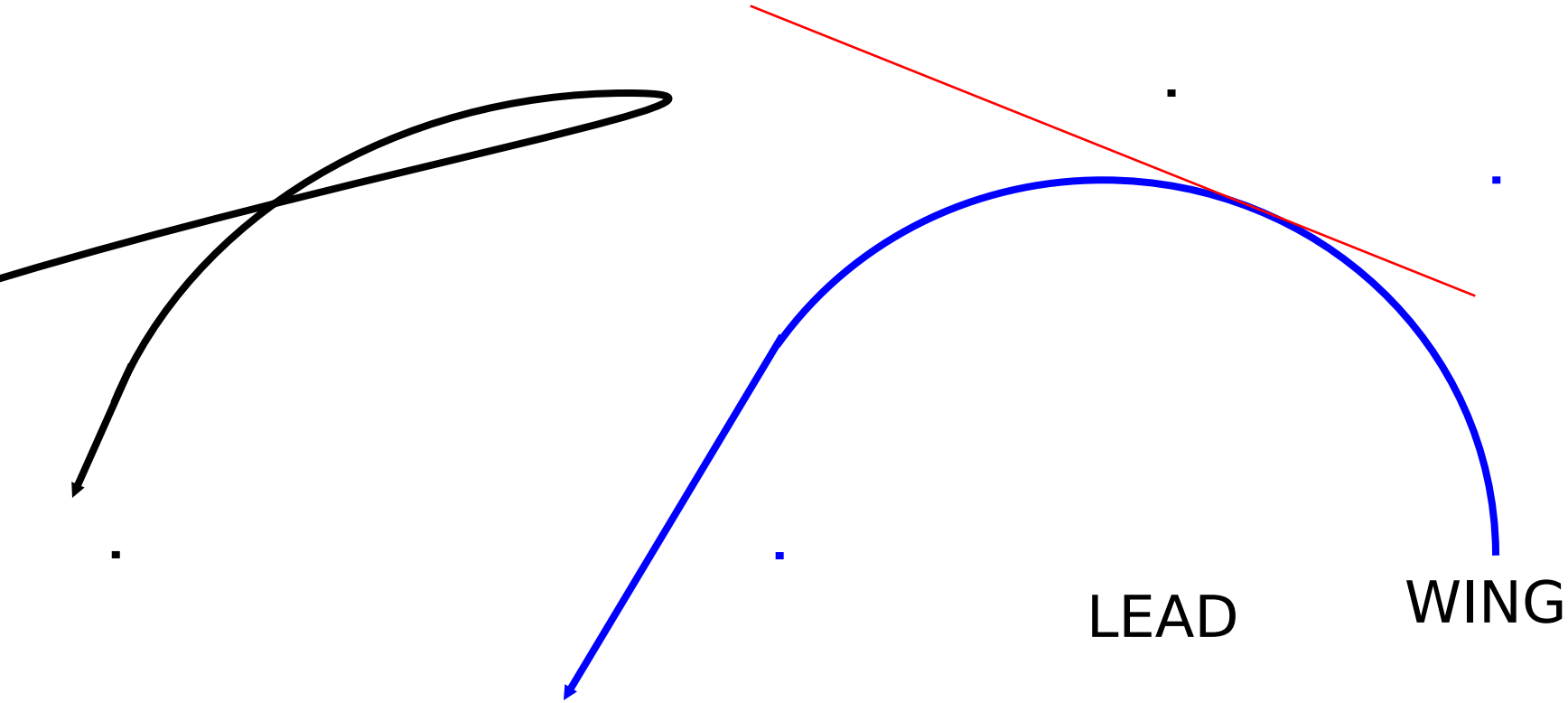
-Pull harder. Still use 90° from final heading check point (probably still sucked and will need to continue stronger pull)-roll out on final and correct as necessary.



Shackle Turns

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- 14 unit level turn into lead, putting the original heading on the 45° benchmark (or as appropriate to help fix your position).
- Maintain 300 kts keeping altitude separation from lead.
- Wait approx 2 sec then pull 14 units back to the original heading. (Corrections for sucked / acute.

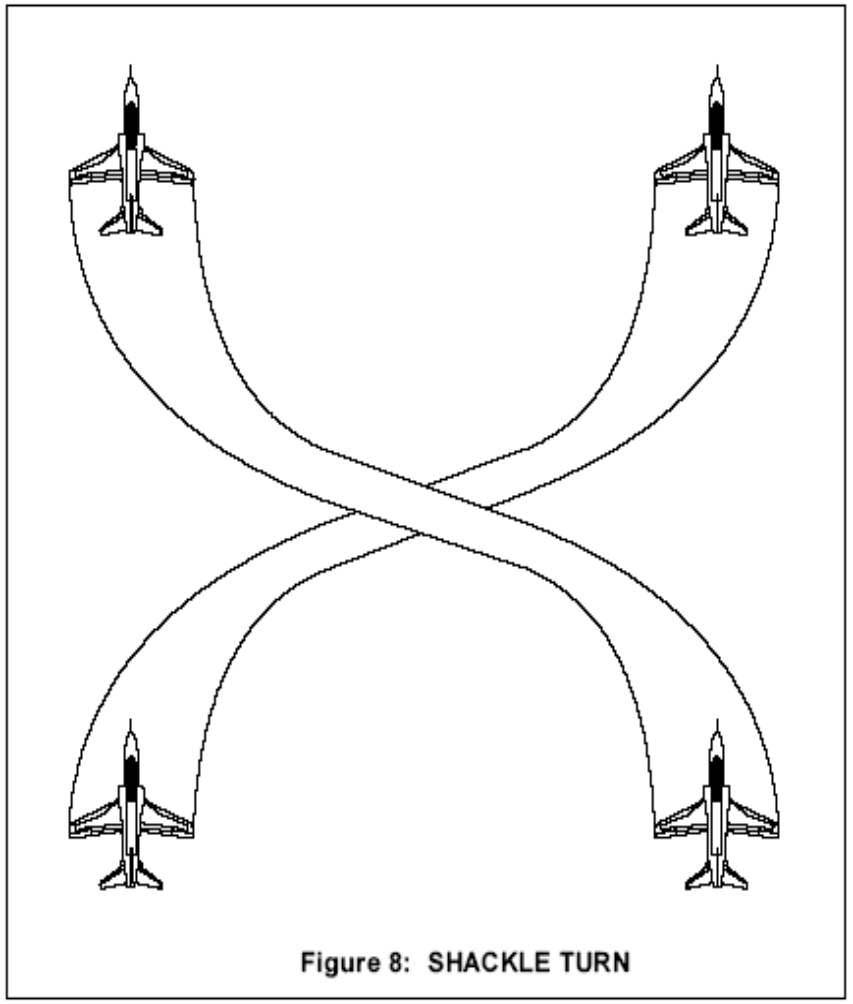

Figure 8: SHACKLE TURN

Off Heading Shackle Turns

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- **Turn to 45° past eventual heading.**
- **If wingman’s turn is less than 45°, delay reversal.**
- **If wingman’s turn is greater than 45°, then reverse upon reaching reversal heading.**

Uncalled Tac Turns

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- **Uncalled Tac Turns are different from TACF 1-5.**
- **An uncalled turn is a Tac or In-place turn.**
- **If the turn is into the wingman, the turn is a tac turn.**
- **If the turn is away from the wingman, the type of turn will depend on when lead turns. If lead turns right away, then the turn is an in-place turn. If lead does not turn immediately, then the turn is a tac turn.**

Offensive Combat Spread

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- **1.5nm Abeam**
- **3000’ Above**
- **Tac Turns-Turn slightly later than normal sight picture (Lead’s intakes on).**
- **In place- No different from DCS**
- **Shackle- Delay one second longer after merge to reverse**

Weapons Envelope

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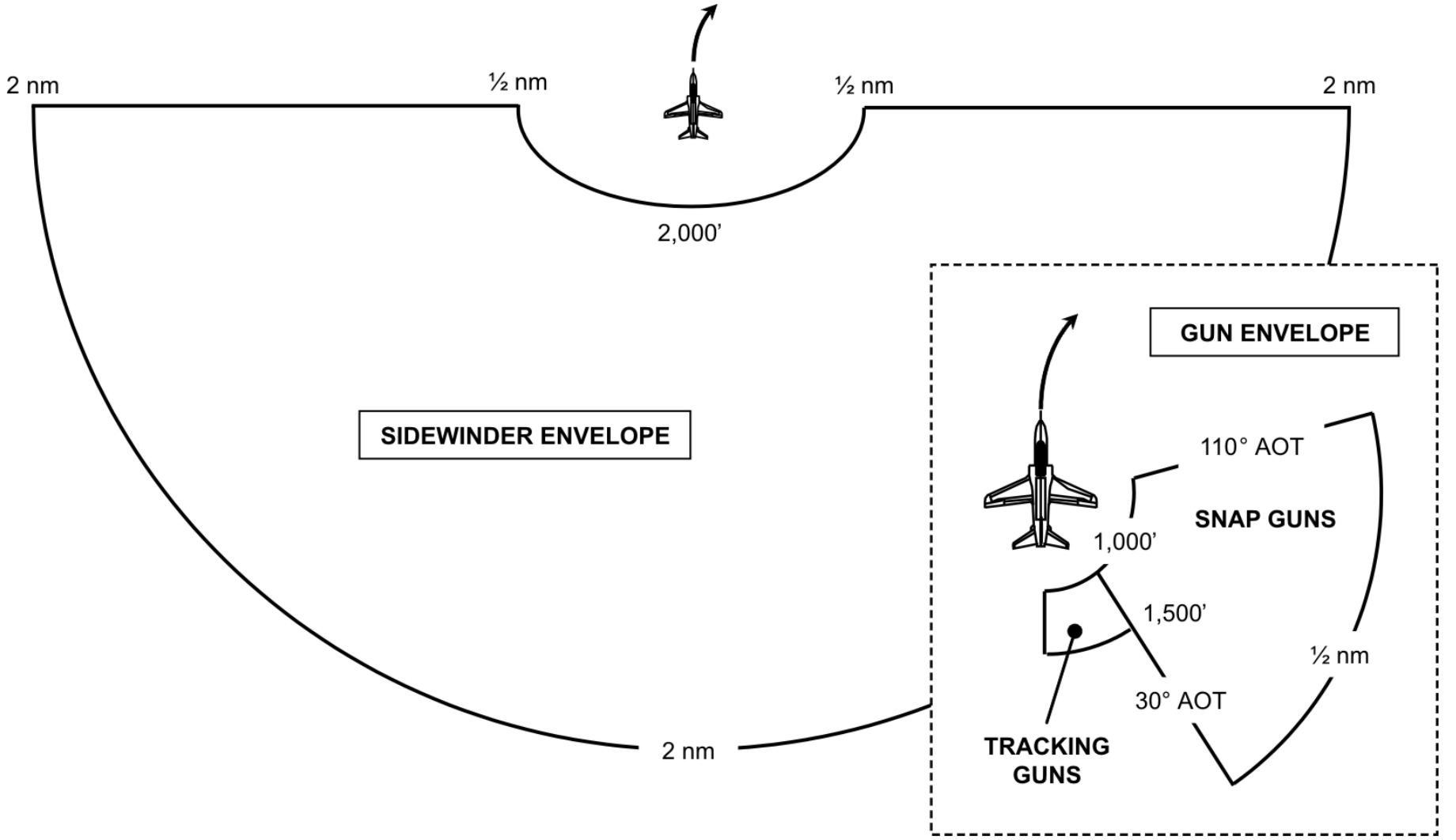

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Unknown Airspeed Rendezvous

- **Continue flying good Tacform until Fenced Out (Master Arm off with Gun deselected and the HUD back in the normal mode) and cleared to join by the lead.**

  - **When joining, make the rendezvous look like one that you have practiced before. Keep an altitude sanctuary until it is suit cased.**
  - **Lead will be setting the power and turning to put the RTB heading on the nose.**
  - **The join will be either a running rendezvous, CV rendezvous, or a combination.**

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COORDINATION BRIEF

- **All members of flight required to attend the rest of the brief**

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ORM

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TTO

- **Who will call a TTO?**
- **What situations will the TTO be called?**
  - **Safety**
  - **Confusion / Misunderstanding**
- **IP Responsibilities**
  - **Recognize need for TTO**
  - **Explanation / Instruction as necessary**
  - **Documentation on ATF**
- **When and how will training resume?**

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ADMIN (card)

- **A/C - ATC C/S - Tactical C/S - Crew**
- **Brief / Walk / Marshal / Takeoff / Land Times**
- **ATC Clearance / IFF**
- **Area**
- **Line / T/O / Abort / RPM**
- **Comm Plan - Tac**
- **Nav Plan**
- **LCLS**
- **Joker / Bingo**

ADMIN

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- **Launch**
  - **Weather**
  - **Preflight / Start / Marshal / Taxi**
  - **T/O / Rdvs**
  - **Formation**
  - **Transit (Admin Cruise) / (ATC Spread)**
  - **RadAlt Usage**
- **RTB**
  - **Form**
  - **Recovery**
  - **Diverts**
  - **NOTAM’s**

Tac Admin

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Fence Checks

Initiated by Wing

Gunsight Tracking:

G’s and Fuel prior

Speed and Angels Comm

Knock It Off Comm / responsibilities

Conduct

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- **Press to Combat Spread**
- **G-Warm**
- **Check Turns**
- **Shackle Turns**
- **Tac Turns**
- **In-Place Turns**
- **Comm-Out Tactical Formation Maneuvering**
- **Random Tactical Maneuvering**
- **Offensive Combat Spread**
- **Gunsight Tracking**
- **Lead (if flown)**
- **Precautionary Approach**

Emergencies

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- **Ground Emergencies**
- **Abort**
- **Rwy Dep / Gnd Ejection**
- **Radio/ICS failure**
- **Loss of Navaids**
- **Lost Plane / Lost Sight**
- **System Failures**
- **Disorientation**
- **Bird strike/ Midair**
- **SAR procedures**
- **Ejection**
- **Aircrew Coordination**
- **Underrun**

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Recap

- **Overall Flow**
- **Questions**

STANDARD DEBRIEFING FORMAT

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- The Flight Lead or Pilot-in-Command is responsible for ensuring all flight or crewmembers are thoroughly debriefed on the conduct of the mission utilizing the “S-P-B-E-MS-LL” format outlined below. (Refer to the CTW-1/CTW-2 Expanding Debriefing Guide for specific objectives).

I. Safety
II. Planning
III. Brief
IV. Execution
V. Mission Success
VI. Lessons Learned